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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 09/784,807 | 02/15/2001 | Stein A. Lundby | PA010230 | 2730 |
| 23696 | 7590 | 08/11/2004 | EXAMINER | |
| Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714 | | | CHO, HONG SOL | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2662 | |
| DATE MAILED: 08/11/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/784,807 | LUNDBY ET AL. | |
| | Examiner | Art Unit | |
| | Hong Cho | 2662 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-13 is/are allowed.
- 6) ☒ Claim(s) 1-2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being unpatentable over Olofsson et al (U.S. 6167031), hereinafter referred to as Olofsson.

Re claim 1 and 2, Olofsson discloses measuring link quality parameters including C/I ratio (*column 11, lines 33-36*) and calculating channel characteristic measures such as mean values and variances of a received signal at the mobile station (*iteratively measuring link quality and determining changes in the measured link quality at remote station, element 112, figure 9, column 12, lines 10-13*).

Allowable Subject Matter

3. Claims 3-8 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose generating link quality messages and differential indicators at two different frequencies. It is noted that the closest prior art, Olofsson, shows a method of measuring link quality parameters such as C/I ratio, received signal strength, and BER. However, Olofsson fails to suggest the process of a differential indicator functioning based on link quality measurement unit.

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4. Claims 9-12 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a base station with a differential analyzer in updating the quality messages, a memory storage unit storing a quality message, and a scheduler unit operative in response to the differential indicators.

5. Claim 13 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a transceiver with a differential analyzer coupled to the data rate calculation unit to generate differential indicators pointing to a next entry in the data rate control table. It is noted that the closest prior art, Chung et al. (US 6741862) shows a data rate control table with DRC messages and transmission information. However, Chung fails to suggest the process of a differential analyzer functioning along with a data rate control unit.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent (6741862) to Chung et al. discloses enhanced reverse-link rate control in wireless communication
- US Patent (5726978) to Frodigh et al. discloses adaptive channel allocation in FDM system
- US Patent (6574211) to Padovani et al. discloses method for high rate packet data transmission
- US Patent (6456598) to Le Strat et al. disclose a method of adapting the air interface in a mobile radio system and corresponding base transceiver

- US Patent (6385462) to Baum et al. disclose a method of adaptive power allocation with selective determination of modulation and coding


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 703-305-0343.

The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hc
Hong Cho
Patent Examiner


HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600